



Complete Summary

GUIDELINE TITLE

Hammer toe syndrome.

BIBLIOGRAPHIC SOURCE(S)

Hammer toe syndrome. American College of Foot and Ankle Surgeons. J Foot Ankle Surg 1999 Mar-Apr; 38(2):166-78. [86 references] [PubMed](#)

COMPLETE SUMMARY CONTENT

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METHODOLOGY - including Rating Scheme and Cost Analysis

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

Hammer toe syndrome including the following diagnostic entities:

- Hammer toe, acquired or congenital
- Clawtoe, acquired or congenital
- Mallet toe
- Overlapping fifth toe, acquired or congenital
- Clinodactyly or curly toe
- Exostosis; hypertrophied condyle; or hyperostosis
- Interdigital heloma or soft corn
- Contraction; contracture; contracted toe

GUIDELINE CATEGORY

Diagnosis

Evaluation

Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Orthopedic Surgery
Podiatry

INTENDED USERS

Physicians
Podiatrists

GUIDELINE OBJECTIVE(S)

To present guidelines on the diagnosis and treatment of hammer toe syndrome

TARGET POPULATION

Children, adolescents, adults, and elderly with hammer toe syndrome

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. History
2. Physical examination
3. Diagnostic procedures
 - X-ray
 - Laboratory tests
 - Comprehensive biomechanical examination
 - Other studies as indicated [such as nerve conduction velocity and/or electromyography, noninvasive vascular testing (e.g., recording Doppler, plethysmography)]

Treatment

1. Nonsurgical care
 - Periodic debridement of hyperkeratotic lesions
 - Orthodigita (padding)
 - Footgear and/or hosiery modifications
 - Corticosteroid injection(s)
 - Nonsteroidal anti-inflammatory medications
 - Topical keratolytics
 - Orthoses
 - Patient education
2. Surgical correction
3. Post-operative management
 - X-ray evaluation
 - Follow-up visits
 - Immobilization
 - Physical therapy
 - Orthoses

MAJOR OUTCOMES CONSIDERED

- Pain control
- Postural fatigue
- Deformity
- Function
- Progression of the existing deformity

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

All American College of Foot and Ankle Surgeons Preferred Practice Guidelines are reviewed by the appropriate panel or committee, and the Advisory Council, and approved by the Board of Directors, American College of Foot and Ankle Surgeons.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Excerpted by the National Guideline Clearinghouse

Diagnosis and Evaluation

The diagnosis of hammer toe is made in the vast majority of cases by an evaluation of historical and physical findings as well as an interpretation of the necessary diagnostic procedures.

History

An appropriate history should include, but not necessarily be limited to, the patient's past medical, surgical, family, allergic, and social histories, as well as documentation of any medications presently being taken. Key factors in the history include the location, duration, severity, and rate of progression of the deformity along with the type of footwear and hosiery worn. Factors that improve or exacerbate the condition should be noted, and any past treatment, whether professional or otherwise, should also be determined.

Physical Examination

The physical examination should include a thorough lower extremity evaluation with specific attention directed to those factors or systems that may bear upon the diagnosis and subsequent treatment of hammer toe syndrome (HTS). The presence and distribution of skin lesions, including clavi, ulcers, adventitious bursa(e), erythema, infection, chronic intertrigo, and interdigital maceration should be noted. The degree of flexibility of the involved joint(s) should be ascertained by examining the foot in both the weight-bearing and nonweight-bearing positions.

Diagnostic Procedures

X-ray Examination

X-ray examination of the symptomatic foot (feet) is usually necessary to confirm and assess the deformity. Unless the patient is physically unable, weight-bearing views should be made with the patient in the angle and base of gait.

Laboratory Tests

Generally, lab studies are not required in the nonsurgical patient. However, when metabolic or inflammatory diseases are suspected, or in the presence of infection, these tests may serve as an aid in diagnosis and subsequent management.

Comprehensive Biomechanical Examination

A biomechanical exam should be performed when deemed clinically necessary to help establish the etiology of the deformity.

Additional Diagnostic Studies

These procedures are not routinely performed as part of the work-up for hammer toe syndrome. They may, however, be indicated in the specific circumstances discussed below:

- Nerve Conduction Velocity and/or Electromyography

Indicated when there is a strong suspicion that a neurologic disorder is contributing to the deformity. Neurologic consultation should be obtained if deemed necessary.

- Noninvasive Vascular Testing (e.g., Recording Doppler, Plethysmography)

Indicated in the presence of, or history of, impaired circulation if surgery is contemplated; or if the vascular condition(s) place the patient at risk.

- Other Diagnostic Modalities

Computerized weight-bearing pressure testing and video analysis are not indicated except in cases of severe or unusual neuromuscular abnormalities involving the toes. At the present time, there is no literature validating the efficacy of these modalities in the diagnosis of hammer toe syndrome.

Treatment of Hammer Toe Syndrome

General Principles of Treatment

The goal of treating hammer toe syndrome is the reduction of symptoms so that the patient can maintain or return to a normal activity level. Although it is recognized that a certain percentage of patients will not receive complete relief, it is anticipated that the vast majority will gain significant improvement from therapy.

Certain classes of patients will have very benign, mild clinical findings. Some of these individuals may have self-limiting conditions that may require no further professional care after appropriate consultation.

The management of hammer toe syndrome has both nonsurgical and surgical components. Nonsurgical (conservative) care is palliative with the objective of reducing or relieving symptoms. If found to be impractical or inadequate because of the nature of the deformity, conservative therapy may not be appropriate. The practitioner should recognize when, in the course of treatment, surgery is indicated. The object of surgical treatment is to relieve symptoms, restore function, and correct the deformity. Management of hammer toe syndrome should be individualized and based on the patient's needs and the specific nature and location of the deformity. Realistic expectations regarding the surgical outcome by both the surgeon and patient are necessary. Each patient must be made aware of the potential for success of the procedure, common complications, and their own particular risk factors.

At times, during surgery for hammer toe syndrome, the surgeon may find it necessary to modify the procedure(s) and/or perform additional procedures other than those originally planned and discussed with the patient. This is acceptable if, in the surgeon's judgment, the modified and/or added procedure(s) are necessary to achieve a postoperative result that is deemed to be in the best interest of the patient.

Sequelae of Nontreatment

The sequelae of not treating hammer toe syndrome are difficult to predict and depend on the developmental stage of the digital deformity, as well as any related pedal or systemic disease that may be present. Although the literature does not conclusively document such sequelae, consensus opinion is that they may include the following:

- Progression of deformities from flexible to rigid
- Pain
- Digital clavi
- Toenail deformities
- Plantar metatarsal head hyperkeratotic lesions
- Bursitis/synovitis
- Tendonitis
- Gait abnormalities with proximal structural symptoms
- Inability to wear certain footgear
- Degenerative joint disease
- Ulceration, possibly leading to infection

Indications for Initiation of Treatment

The presence of any of the following signs or symptoms provides a rationale for the initiation of treatment for hammer toe syndrome:

- Digital deformity with or without pain
- An associated lesion or finding that may present as:
 - Hyperkeratosis

- Adventitious bursa(e)
- Ulceration
- Erythema
- Infection of soft tissue and/or bone
- Interdigital maceration and/or heloma
- Biomechanical instability of the toe and related metatarsophalangeal joints
- Arthrosis of the toe and/or related metatarsophalangeal joint (MTPJ)

Nonsurgical (Conservative) Treatment Indications

In general, nonsurgical treatment of hammer toe syndrome is indicated when:

- Adequate pain relief and an acceptable level of function are attainable by nonsurgical means
- The patient does not desire surgical management
- The patient is a poor surgical candidate

The following types of nonsurgical treatment and/or counseling may be effective in managing hammer toe syndrome, either in combination or as an isolated therapeutic regimen:

- Periodic debridement of hyperkeratotic lesion(s) to reduce symptomatology
- Orthodigita (padding) to relieve pressure
- Footgear and/or hosiery modifications to accommodate deformities or relieve pressure
- Corticosteroid injection(s) may be beneficial for short-term, symptomatic treatment of acute inflammatory processes associated with hammer toe syndrome. Patients in whom there is a lack of therapeutic response to steroid injection(s) within an appropriate period of time should be offered an alternative form of therapy.
- Nonsteroidal anti-inflammatory medications may be appropriate in both the acute and chronic management of symptoms related to both soft tissue and joint inflammation.
- Topical keratolytics may be helpful in reducing keratotic lesions. These should only be used under a practitioner's supervision in order to prevent the potentially severe complications associated with inappropriate use.
- Orthoses may be used to control abnormal biomechanical influences and may, on occasion, relieve symptoms associated with hammer toes. However, there is no evidence that the hammer toe syndrome is improved, or that its progression will be stopped or slowed as a result of their use.
- Patient education should include a discussion of the etiology and prognosis of the hammer toe deformity with recommendations that may involve a change in shoe style, activity, and/or occupation. In some cases, methods of self-treatment of mild symptomatology should also be discussed with the patient which may negate the need for further professional care.

Surgical Treatment Indications

The decision to intervene surgically is based on the nature of the presenting symptoms, the judgment of the practitioner, and the patient's preference. Surgical treatment is indicated when:

- Other nonsurgical methods of treatment are less desirable, unsuccessful, and/or impractical
- The patient complains of pain, deformity, and/or altered function, which is perceived as adversely affecting his or her lifestyle and/or occupation
- A deformity exists involving any combination of the metatarsophalangeal joints, proximal interphalangeal joint (PIPJ) and/or distal interphalangeal joint (DIPJ) that is documented by:
 - Demonstrated pathology on x-ray (flexible deformities may not be obvious on x-ray)
 - Clinical findings of hammer toe syndrome
- The patient is informed as to the etiology, course, and prognosis of the deformity as well as the risks and ramifications of surgery.

Surgical Protocols

Site of Surgery

Surgical treatment of hammer toe syndrome in the otherwise healthy adult can be performed safely in a variety of surgical settings such as a hospital, an ambulatory surgical center, or an appropriately equipped office-based surgical suite. Although the majority of hammer toe surgery in the otherwise healthy adult is performed on an outpatient basis, there are some situations that may warrant inpatient hospitalization. These include, but are not necessarily limited to, the following:

- Coexisting medical conditions that would increase risk and preclude outpatient care
- Performance of multiple and/or complex surgical procedures that require postoperative hospitalization
- Necessity for parenteral medications when home or outpatient administration of these drugs is inappropriate or impractical
- Perioperative complications
- Anesthetic complications

Anesthesia

Local anesthesia, with or without monitored anesthesia care (MAC), is generally the anesthetic of choice for all of the procedures that follow. However, in certain circumstances, such as during the performance of multiple procedures, surgery on pediatric patients, or persons with allergies, high anxiety states, or coexisting medical conditions, general or regional anesthesia may be preferred.

Hemostasis

Complete absence of bleeding at the time of surgery is not mandatory for the success of hammer toe surgery. It is desirable however, and may be achieved by some form of reversible means of hemostasis when not medically contraindicated.

Surgical Preparation

Universal precautions must be observed in the performance of hammer toe surgery. Additionally, antiseptic surgical preparation should be utilized prior to the start of surgery.

Preoperative Lab Testing

Preoperative laboratory requirements should be based upon the patient's past medical history, clinical findings, and the requirements of the surgical facility.

Prophylactic Antibiotics

There may be certain situations where prophylactic antibiotics might be used. Although there are varying opinions regarding this practice, those authors who do recommend antibiotic prophylaxis seem to agree upon the following indications:

- Surgery lasting more than two hours
- Surgery on a systemically compromised patient
- Insertion of a joint implant
- A break in sterile technique intraoperatively

The antibiotic selected should be effective against the pathogenic organism most likely to be encountered if an infection were to occur following hammer toe surgery. In the otherwise healthy adult, this is most often coagulase positive staphylococci. It is recommended that the appropriate drug be administered intravenously 15 to 30 minutes prior to the start of surgery or inflation of a tourniquet. If an intramuscular route is selected, the antibiotic should be given approximately 45 to 60 minutes prior to the start of surgery or inflation of a tourniquet.

Histopathological Examination of Excised Tissue

Routine histopathological examination of tissue excised during hammer toe surgery is not deemed to be necessary unless there is strong suspicion for a neoplasm or other significant abnormality.

Adjunctive Surgical Techniques

Use of laser technology to treat hammer toe syndrome is unwarranted since, at this time, there is no valid evidence of its efficacy for treatment of this condition.

Bilateral or Multiple Deformities/Serial Surgery

In cases of bilateral or multiple hammer toe deformities, it is appropriate to perform surgery on all affected digits at the same surgical session if this is mutually agreeable to the patient and the surgeon. In fact, it may be considered inappropriate to operate on each foot or digit independently (at different surgical sessions) unless the postoperative course or rehabilitative process will be compromised by performing multiple procedures. The complexity of the procedures as well as the patient's ability to adhere to the prescribed postoperative regimen are two important factors to be considered when bilateral or multiple surgery is contemplated.

Second Surgical Opinion

A second surgical opinion or consultation should be made available if the patient or surgeon desires. The second opinion should be rendered only by an individual qualified to perform the procedure.

Current Status of the Surgical Correction of Hammer Toe Syndrome

The following discussion of surgical procedures is presented according to the individual deformities described in the guideline document. In the otherwise healthy patient with a digital deformity, selection of an appropriate procedure(s) is based upon the joint(s) involved, the associated flexibility of the contracture(s), and the related abnormalities that exist.

Metatarsophalangeal Joint Contractures

Since some digital deformities may involve a sagittal plane contraction of dorsiflexion at the associated metatarsophalangeal joints, a sequential soft tissue release in this area may be required. To produce reduction of the metatarsophalangeal joints contracture, one or more of the following procedures may be necessary:

- Extensor hood release
- Extensor tendon lengthening(s)
- Metatarsophalangeal joints capsulotomy
- Release of metatarsophalangeal joints collateral ligaments
- Flexor plate release
- Flexor tendon transfer
- Extensor tendon transfer

In cases where soft tissue procedure(s) fail to adequately reduce the contracture deformity, a joint resection (arthroplasty), shortening osteotomy, and/or osteotomy of the associated metatarsal may be required. In isolated cases, where a flail (floppy) toe is the result of surgery, a syndactylization may be required.

Hammer Toe (Flexible)

Proximal Interphalangeal Joint Resection (Arthroplasty)

This procedure is utilized most frequently and is the most well supported in the literature. It is described alone or in conjunction with associated sequential soft tissue releases for the reduction of hammer toe deformity.

Isolated Flexor Tendon Transfer

Flexor tendon transfer to the dorsum of the proximal phalanx to reduce metatarsophalangeal joints deformity is described in detail by several authors.

Implant Arthroplasty

The use of a silicone implant to replace the resected bony segment(s) is documented as being efficacious in correction of hammer toe syndrome.

Flexor Tenotomy

This is described as an isolated procedure to permanently correct a flexible contracture of the proximal interphalangeal joint and/or distal interphalangeal joint, but has been used most often as an adjunctive procedure in the reduction of this deformity.

Extensor Tendon Lengthening or Tenotomy and Metatarsophalangeal Joint Capsulotomy

These procedures, although described for correction of flexible hammer toe, have not been documented in the literature as being efficacious either as isolated procedures or in combination with one another as a permanent correction of this deformity. Further research is required to evaluate their long-term effects. They can however, be useful as adjunctive techniques in hammer toe surgery.

Hammer Toe (Semirigid/Rigid)

Proximal Interphalangeal Joint Resection (Arthroplasty)

Used alone or in conjunction with associated soft tissue releases as required, this procedure is the most frequently performed and efficacious approach for this condition.

Proximal Interphalangeal Joint Arthrodesis (Fusion)

In circumstances where greater stability of the toe is desired, arthrodesis may be the procedure of choice. Such instances might include associated hallux valgus, cavovarus deformity, neuromuscular conditions, and recurrent hammer toe syndrome.

Implant Arthroplasty

The use of a silicone implant to replace the resected bony segment is documented in the literature as being efficacious in correction of hammer toe syndrome.

The following procedures are used less frequently than the more commonly performed procedures noted above:

Diaphysectomy of the Proximal Phalanx

Middle Phalangectomy

Isolated Resection of the Base of the Proximal Phalanx

This procedure is usually not recommended for reduction of hammer toe syndrome since it destabilizes the metatarsophalangeal joints and has the

potential for causing complications such as flail toes and transfer lesions. When base resection is utilized, syndactylization is an appropriate adjunctive procedure.

Clawtoe (Flexible)

The literature is scant regarding the surgical approach to the flexible clawtoe.

Proximal Interphalangeal Joint Resection (Arthroplasty)

Used alone or in conjunction with associated soft tissue releases as required, this procedure is frequently performed for this condition.

Proximal Interphalangeal Joint Arthrodesis (Fusion)

In circumstances where greater stability of the toe is desired, arthrodesis may be the procedure of choice.

Flexor Tendon Transfer

Flexor tendon transfer to the dorsum of the proximal phalanx has been described for reduction of the metatarsophalangeal joints, proximal interphalangeal joint, and distal interphalangeal joint deformity.

Extensor Tendon Transfer

Long extensor tendon transfer to the tarsal bone region with proximal interphalangeal joint / distal interphalangeal joint fusion is performed in certain selected cases with multiple severe digital contractures associated with cavus foot syndrome.

Clawtoe (Semirigid/Rigid)

The correction of this deformity usually involves a combination of osseous and soft tissue procedures depending on the flexibility of the involved joint contracture. Joint resection (arthroplasty) or arthrodesis of the proximal interphalangeal joint /distal interphalangeal joint as well as middle phalangectomy may be utilized. Arthroplasty of the proximal interphalangeal joint with distal interphalangeal joint flexor tenotomy may be utilized when the distal interphalangeal joint contracture is reducible.

Mallet Toe (Flexible)

When the distal interphalangeal joint is flexible (reducible), flexor tenotomy and capsulotomy at this joint are usually the procedures of choice. In cases where the digit is elongated, resection of the head of the middle phalanx (distal interphalangeal joint arthroplasty) may be required to shorten the toe.

Mallet Toe (Semirigid/Rigid)

Generally, resection of the head of the middle phalanx (distal interphalangeal joint arthroplasty) is performed to reduce this deformity. Alternatively, a middle phalangectomy may be performed when reduction of digital length is desirable in patients whose middle phalanx is small.

Overlapping Fifth Toe

An attempt should be made to reduce all components of this triplane deformity. The dorsal contracture may be reduced via appropriate skin-plasty, extensor tendon lengthening or tenotomy, tendon transfer, and/or metatarsophalangeal joint capsulotomy. Joint resection (arthroplasty) of the proximal interphalangeal joint may be necessary to reduce the proximal interphalangeal joint contracture and may facilitate greater digital relaxation. On rare occasions, an osteotomy of the metatarsal may be required. Syndactylization to the fourth digit may be necessary in resistant or recurrent cases.

Digiti Quinti Varus (Adductovarus)

Resection of the head of the phalanx (arthroplasty) is usually required to correct this deformity. To achieve derotation, skin-plasty and other soft tissue procedures may be used in conjunction with the osseous procedure.

Clinodactyly (Curly Toe)

Resectional arthroplasty, middle phalangectomy, or fusion at the level of the deformity is usually required in rigid cases. A flexor tenotomy and capsulotomy and other soft tissue procedures may be useful in flexible deformities.

Exostosis, Hypertrophied Condyle, or Hyperostosis

Simple reduction of the hypertrophic bone is the recommended treatment.

Interdigital Corn

Reduction of the underlying bony prominences is the primary treatment of this deformity. In many instances however, joint resection (arthroplasty), and/or implantation arthroplasty may be necessary. In recurrent or resistant cases, syndactylization of the digits may be necessary to prevent recurrence and/or digital instability which may be a result of the necessary resection of osseous tissue. This is most frequently encountered with lesions of the fourth interdigital webspace.

Postoperative Management

X-ray Evaluation

For soft tissue procedures, x-rays should be taken immediately following surgery or at the first postoperative visit. No sequential x-rays are required in an uncomplicated postoperative course. For osseous procedures without fusion or implant, the above protocol applies. For procedures involving fusion, fixation or implantation, immediate postoperative or intraoperative x-ray imaging is usually

required. Sequential x-rays should be obtained to assess osseous healing or implant alignment at approximately six to eight weeks. More frequent views may be indicated in cases that are complicated.

Frequency of Visits

Patients without signs or symptoms of a complication should generally be seen within the first postoperative week. Subsequent visits are scheduled according to the procedures performed and individual patient recovery. The patient should be followed until the goals of surgical treatment and rehabilitation have been achieved.

Weight-Bearing Status/Immobilization

In general, full weight-bearing in a postoperative shoe or other appropriate pedal splinting device is allowed immediately following surgery. A surgical dressing is usually utilized in the immediate postoperative period and, as healing progresses, bandaging may be used for compression and splinting until osseous healing and/or resolution of edema has occurred. Return to footgear depends on the operative procedure and the postoperative course. Cast immobilization for multiple digital fusions and other complex procedures is acceptable.

Physical Therapy

The use of physical therapy following hammer toe correction may be helpful in certain selected instances. These may include, but are not necessarily limited to, delayed wound healing, excessive swelling, decreased range of motion and neurovascular problems. The duration and frequency of treatment should not be expected to exceed three visits per week for a period of two to three weeks, however, complex cases may require a more prolonged course of therapy. The efficacy of this treatment following hammer toe surgery has not been scientifically documented and investigation is needed to determine its role in postoperative recovery.

Orthoses

The use of orthoses postoperatively is predicated upon controlling abnormal compensatory motion and function that may have contributed to the development and progression of the deformity. Although theoretically thought to influence foot mechanics, there is currently no known scientific evidence to support the use of functional orthoses following hammer toe surgery. Because of the widespread use of this treatment modality, research is needed to critically analyze the efficacy of orthoses.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management of patients with hammer toe syndrome should:

- Relieve pain (in and out of shoes)
- Reduce deformity
- Improve function
- Prevent morbidity
- Prevent progression of the existing deformity

POTENTIAL HARMS

The surgical treatment of hammer toes has associated risks with potential for complications and adverse sequelae. Common complications specific to digital surgery may include, but are not necessarily limited to, the following:

- Persistent edema
- Recurrence of deformity
- Residual pain
- Excessive stiffness

Less common complications may include the following:

- Numbness
- Flail toe
- Symptomatic osseous regrowth
- Malposition of toe
- Malunion/nonunion
- Implant fatigue, failure, and/or intolerance
- Infection
- Vascular impairment
- Gangrene

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The Preferred Practice Guidelines are intended to provide guidance for general patterns of practice and not to dictate necessarily the care of a particular patient. The guidelines embodied in the documents should generally meet the needs of most patients; however, no guideline(s) can address the complete needs of each and every patient. The ultimate judgment regarding the care rendered to a given patient must be made by the clinician based on input from the patient, taking into account all associated circumstances. Compliance with the guidelines will not necessarily ensure a successful outcome in every case. Although comprehensive in scope, the guidelines should not be considered to be inclusive of all appropriate

methods of care or exclusive of other treatment approaches that are reasonably directed at obtaining the best results.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Hammer toe syndrome. American College of Foot and Ankle Surgeons. J Foot Ankle Surg 1999 Mar-Apr; 38(2):166-78. [86 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1992 (revised 1999)

GUIDELINE DEVELOPER(S)

American College of Foot and Ankle Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Foot and Ankle Surgeons

GUIDELINE COMMITTEE

Preferred Practice Guidelines Committee, Digital Panel

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Panel Members: Michael J. Trepal, DPM, FACFS, Chairman; Lawrence B. Harkless, DPM, FACFS, Vice Chairman; Kevin T. Jules, DPM; Thomas B. Leecost, DPM; Robert G. O'Keefe, DPM; Richard I. Polisner, DPM; George F. Wallace, DPM; Marie L. Williams, DPM.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates of a previously issued version [Park Ridge (IL): American College of Foot and Ankle Surgeons; 1992. 27 p. (Preferred practice guideline; no. 1/92)].

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the American College of Foot and Ankle Surgeons, 515 Busse Highway, Park Ridge, IL 60068-3150; Web site: www.acfas.org.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on July 12, 1999. The information was verified by the guideline developer on March 1, 2000. This summary was updated by ECRI on October 31, 2001. It was reviewed by the guideline developers as of March 11, 2002.

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The logo for FIRSTGOV, with "FIRST" in blue and "GOV" in red, and a small red star above the "I".

